

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

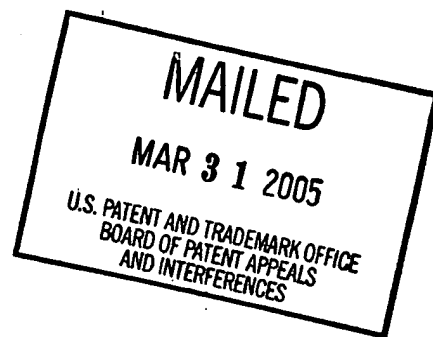
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DONALD G. RUSSELL

Appeal No. 2005-0963
Application 09/372,835

ON BRIEF



Before WARREN, WALTZ and TIMM, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal and Opinion

We have carefully considered the record in this appeal under 35 U.S.C. § 134, including the opposing views of the examiner, in the answer and supplemental answer,¹ and appellant, in the brief and reply brief,² and based on our review, find that we cannot sustain the rejection of appealed claims 20 through 61, all of the claims in the application, under 35 U.S.C. § 103(a) as being unpatentable over DeSena.^{3,4}

¹ The supplemental answer was submitted pursuant to our remand entered September 5, 2003, under Appeal No. 2003-0436 in this application.

² In the communication filed August 6, 2004, appellant notified the Board that a reply brief would not be filed in reply to the supplemental answer.

³ Answer, pages 3-7; supplemental answer, pages 1-6.

We interpret the appealed claims by giving the terms thereof the broadest reasonable interpretation in light of the written description in the specification as it would be interpreted by one of ordinary skill in this art, without reading into a claim any limitation or particular embodiment which is disclosed in the specification. *See, e.g., In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). We find that the language of product claim 46 is representative of that of the appealed claims, which claim, as set forth in appellant's brief, reads as follows:

46. A marker for radiographic examination of tissue having anatomical detail present in the tissue, wherein a source of x-ray radiation is provided for generating radiation at a predetermined energy level suitable for imaging tissue having a predetermined tissue density, the marker is positioned between the source of x-ray radiation and the tissue, and the marker and tissue type are exposed to the x-ray radiation at the predetermined energy level to generate a radiographic image of the tissue having the shadow of the marker superimposed thereon, the marker comprising:

a first outer surface for contacting a patient's skin; a second outer surface located on an opposite side of the marker relative to the first outer surface; and at least one partially radiolucent, partially radiopaque material located therebetween, said at least one partially radiolucent, partially radiopaque material defining a density and thickness based on the predetermined tissue density and the predetermined energy level of radiation provided which absorbs from about 2% to about 75% of the incident radiation and, in turn, generates a radiographic image of the tissue having the shadow of the marker superimposed thereon with the anatomical detail present in the tissue clearly visible through the radiographic shadow projected by the marker.

The plain language of claim 46, in pertinent part, specifies that the marker comprises at least, *inter alia*, "at least one partially radiolucent, partially radiopaque material defining a density and thickness" that absorbs at least the specified amount of incident radiation, such that the generated radiographic image has "the shadow of the marker superimposed thereon with the anatomical detail present in the tissue clearly visible through the radiographic shadow projected by the marker." Thus, in view of the transitional term "comprising," the marker must at least contain some amount of material, however small, that projects a radiographic shadow such that anatomical detail is visible therethrough on the radiographic image, and can contain any

⁴ The examiner states that "the rejections based on the Zinreich patent are hereby withdrawn" (answer, page 2).

additional materials which affect the radiographic image, including marker material that is entirely radiopaque. *See generally, Exxon Chem. Pats., Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1555, 35 USPQ2d 1801, 1802 (Fed. Cir. 1995) (“The claimed composition is defined as comprising - meaning containing at least - five specific ingredients.”); *In re Baxter*, 656 F.2d 679, 686-87, 210 USPQ 795, 802-03 (CCPA 1981) (“As long as one of the monomers in the reaction is propylene, any other monomer may be present, because the term ‘comprises’ permits the *inclusion* of other steps, elements, or materials.”).

We illustrate our interpretation of the claim language by referring to the drawings of United States Patent 6,041,094 (‘094 patent) issued to appellant, which matured from application 08/934,121, of which the present application was characterized as a continuation as stated by appellant upon filing (*see also* brief, page 1) but did not include the drawings as filed. The present specification (pages 5 and 8-11) and ‘094 patent (cols. 3 and 4-6) describe the radiographic images in **FIGs. 2** through **6** as showing that marker strips of rubber, aluminum, vinyl and plastic/barium sulfate cast a radiographic shadow with anatomical detail visible through the shadow, as required by the appealed claims. The radiographic image in **FIG. 1** is described in the specification and ‘094 patent as showing “rubber O-shaped collars **10, 10**” which have the radiopacity and radiolucent to cast an image and permit detail **16** and **18** to be clearly imaged. We observe that the collars **10, 10** at the top of the radiographic image are entirely of radiopaque material because anatomical or other detail is not visible therethrough, and thus, are outside of the appealed claims.

The examiner finds that DeSena discloses “adhesive markers 3 bearing patterns formed of barium or aluminum,” citing col. 3, ll. 11-13, and suggests “that the clarity of the patterns is controlled by their thickness,” citing col. 4, ll. 62-65, and thus, takes the position that “[i]t would have been obvious to one of ordinary skill in this art . . . to adjust the thickness or % attenuation of the DeSena markers to provide the desired opacity under the specified parameters” (answer, page 3). The examiner further recognizes that “[t]he issue . . . is whether or not DeSena’s marker is partially radiolucent, partially radiopaque . . . and exhibits the features delineated by the rest of the claim,” contending that the “desired performance” of the markers is highlighting and marking an area of interest, citing col. 1, ll. 24-31 (answer, page 4; supplemental answer, page 3). In this

respect, the examiner finds that “DeSena does not prescribe a marker thickness but specifies that it be thin and flexible enough to follow the contour of a body part,” citing col. 3, ll. 13-19, and points to the disclosure that aluminum is deposited in sufficient thickness to highlight the area of interest, citing col. 4, ll. 62-65 (answer, page 4). On this basis the examiner contends that “the degree of opacity or x-ray absorption is a function of the thickness of the deposited aluminum, and DeSena instructs that the thickness or absorption is just enough to make the marker visible in the image but not to obscure the details should it inadvertently be placed over a vital region beneath the skin,” pointing to col. 1, ll. 24-32, and col. 4, ll. 62-64, as evincing “that the marker not be so thick as to hide vital information” (answer, pages 4-5; supplemental answer, page 3). The examiner further submits that there is no teaching or suggestion in DeSena with respect to the “‘line’ thickness” of the marker patterns, contending that col. 4, ll. 52-69, describes “a process by which aluminum is vapor deposited through a stencil onto the adhesive tape” and “‘thickness’ unequivocally refers to the depth of the aluminum layer that is being deposited which in turn determines the degree of radiopacity” (supplemental answer, pages 3-4).

Appellant points out that the marker patterns of DeSena are disclosed therein to be radiopaque, citing col. 4, ll. 31-34 and 52-54, and col. 5, ll. 7-10, and that the markers are “in perimeter shapes” that encompass an area of interest, citing col. 3, l. 65-66, and on this basis argues that “DeSena teaches avoiding the danger of obscuring radiographic detail not by making the marker partially radiolucent, as recited in the present claims, but by placing the radiopaque marker around and outside of the area of interest,” further citing col. 5, ll. 7-11 and DeSena claim 1, limitation “b” (brief, page 12). Appellant contends that the passage at col. 4, e.g., ll. 62-65, only “explains the manner of making the radiopaque markers” (*id.*, page 13). In the reply brief, appellant further points out that the DeSena markers “encircle” an area of interest, contending that “[a]s shown, for example, in Fig. 2 . . . each radiopaque marker 3 is in the form of sharp, solid lines that are dimensioned to tightly surround or encircle cutaneous landmarks” (pages 2-4); and are radiopaque, such that the radiograph does not show underlying anatomical detail through the shadow of the marker, contending that DeSena **FIGs. 5-9** “illustrate that each of . . . [the] markers form on a radiograph opaque or solid lines, without any anatomical detail . . . visible through the radiographic shadow of the marker” (pages 4-6).

It is well settled that in order to establish a *prima facie* case of obviousness under § 103(a), the examiner must show that some objective teaching, suggestion or motivation in the applied prior art taken as a whole and/or knowledge generally available to one of ordinary skill in this art would have led that person to the claimed invention as a whole, including each and every limitation of the claims arranged as required by the claims, without recourse to the teachings in appellant's disclosure. *See generally, In re Rouffet*, 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998); *Pro-Mold and Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629-30 (Fed. Cir. 1996); *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996) ("When obviousness is based on a particular prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. [Citation omitted.] This suggestion or motivation need not be expressly stated. [Citation omitted.]"); *In re Fine*, 837 F.2d 1071, 1074-76, 5 USPQ2d 1596, 1598-1600 (Fed. Cir. 1988); *In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988). It is further well settled that a reference stands for all of the specific teachings thereof as well as the inferences one of ordinary skill in this art would have reasonably been expected to draw therefrom, *see In re Fritch*, 972 F.2d 1260, 1264-65, 23 USPQ2d 1780, 1782-83 (Fed. Cir. 1992); *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968), presuming skill on the part of this person. *In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

We have carefully considered the disclosure of DeSena in light of the arguments advanced by the examiner and appellant, and based on our review, find ourselves in agreement with appellant's position with respect to the teachings and inferences that one of ordinary skill in this art would have found in DeSena. We add the following for emphasis. We find that one of ordinary skill in this art would have found in the DeSena **FIGs.**, particularly **FIG. 2**, taken in light of the disclosure of the reference as a whole, the clear teachings and inferences that the markers of the reference outline an area of interest with thin, continuous or broken lines formed of radiopaque material on a radiolucent substrate by applying the material through a stencil. Thus, as appellant argues, this person would not have found in DeSena any teaching or inference which would have provided a suggestion or motivation to modify the teachings of the reference

to make the thin line radiolucent/radiopaque to the extent that the line *per se* casts a radiographic shadow with anatomical detail visible therethrough on the radiographic image as required by the appealed claims as we interpreted the language thereof above. *See generally, B.F. Goodyear, supra.*

Thus, DeSena does not provide substantial evidence in support of the examiner's *prima facie* case of obviousness in the answer considered in light of appellant's arguments in rebuttal in the reply brief, and accordingly, because the examiner has not again established a *prima facie* case of obviousness in the supplemental answer, we reverse the ground of rejection on appeal.⁵ *See In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

The examiner's decision is reversed.

⁵ We reach our decision in this appeal without consideration of the evidence in the Declaration of Denise Zielanski, filed April 27, 2001, relied on in the brief and reply brief.

Reversed

Robert L. Brown

CHARLES F. WARREN
Administrative Patent Judge

Thomas A. Waltz

THOMAS A. WALTZ
Administrative Patent Judge

Catherine

CATHERINE TIMM
Administrative Patent Judge

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